Specify PIONEER

PIONEER PLASTICS INC.
BOX 8066 JACKSONVILLE, FLORIDA 32211

Pioneer PLASTIC LABWARE

PIONEER PLASTICS INC.

PIONEER LABWARE IS UNBREAKABLE

On the following pages you will see the finest plastic laboratory ware available today. The name Pioneer has been noted for years for its consistently high quality and good design. Initially, Pioneer Labware costs less—and saves still more every time it is dropped. It completely eliminates the chance of injury, especially important in classroom laboratories where students may momentarily become careless. Each item in this line has been engineered for the laboratory. In order to give the end user the best possible product, the material used in the manufacture of each item of Pioneer Labware has been carefully selected for its properties from the many formulations currently available. Presently, the materials used in manufacturing this line are Polyallomer, Polypropylene and Polyethylene (high, medium or low density depending on the application of the item). When new and better materials are available, you will see them first in Pioneer Labware. For consistently high quality and good design, always specify Pioneer Labware, your best buy in labware today.

INDEX

Adapters, Hose	3
Reducing	3
Beakers	5
Beaker Cover	5
Bends—90°	10
Bottle, Dropper	3
Rests	4
Stoppers	7
Weighing	4
Burette Cover	5
Check Valves	13
Coasters	4
Connectors	12-13
Container, Storage	4
Coplin Jar Cover	6
Dessicator Cover	5
Dispensers, Reagent	6
Measure-Matic	6
Dropper Bottles	3
Drying Tubes	14
Evaporating Dish	14
Filter Disc	7
Filter Pump	14
Funnel Holder	9
Funnels, All Kinds	8-9
Manifold-Y Connector	12
Measure-Matic Dispenser	6
pH Meter Sample Cup	5
Pouring Spouts	4
Pump, Acid	6
Filter	14
Reagent Dispenser	6
Sample Cup, pH Meter	4
Spouts, Pouring	4
Stopcock	13
Stoppers, All Kinds	7
Storage Container, 3-Piece	4
Test Tube	14
Thistle Tube	9
Tubing, All Kinds	10-11
Tubing Accessories	13
Tubing Connectors	12-13-14
Watch Glasses	6
Weighing Bottle	4
Y Connector	12

BE SURE TO SPECIFY

PIONEER PLASTIC LABWARE PP

WHEN ORDERING FROM YOUR FAVORITE SUPPLY HOUSE

Minimum Billing $10.00
Quantity Discounts
10-24 Assorted Cases—5%
25 or More Assorted Cases—10%

ADAPTERS

REDUCING ADAPTERS

STANDARD TAPER — BUSHING TYPE

These straight reducing adapters with medium length standard taper inner and outer joints are made of heat resistant polyolefin. Unbreakable and "FREEZE-PROOF," these adapters do the job at a mere fraction of the cost of their glass counterparts.

CODE	JOINT OUTER	JOINT INNER	EACH	DOZEN (each)	CASE (24) (each)
RA 19-10	19/22	10/18	$ .90	$ 9.60 (.80)	$16.80 (.70)
RA 24-10	24/25	10/18	.95	10.20 (.85)	18.00 (.75)
RA 24-19	24/25	19/22	1.00	10.80 (.90)	19.20 (.80)
RA 29-24	29/26	24/25	1.05	11.40 (.95)	20.40 (.85)
RA 34-19	34/28	19/22	1.10	12.00 (1.00)	21.60 (.90)
RA 34-24	34/28	24/25	1.15	12.60 (1.05)	22.80 (.95)

HOSE ADAPTERS

Straight hose adapters, with inner and outer medium length standard taper joints, have a serrated hose connection tapering from 3/8" to 1/4" in 15/16" length. This taper accommodates a wide range of tubing sizes. Made of heat resistant polyolefin, these adapters are unbreakable and "FREEZE-PROOF," thus protecting your valuable glassware. These items have many uses in the lab; joined together they can be used as small drying tubes, tubing connectors, and other applications too numerous to mention. No lab should be without an assortment.

CODE	JOINT	EACH	DOZEN (each)	CASE (36) (each)
HA 19M	19/22 inner	$.55	$6.00 (.50)	$16.20 (.45)
HA 19F	19/22 outer	.55	6.00 (.50)	16.20 (.45)
HA 24M	24/25 inner	.60	6.60 (.55)	18.00 (.50)
HA 24F	24/25 outer	.60	6.60 (.55)	18.00 (.50)

BOTTLES

DROPPER BOTTLES

WITH IMPROVED SCREW—ON TOP

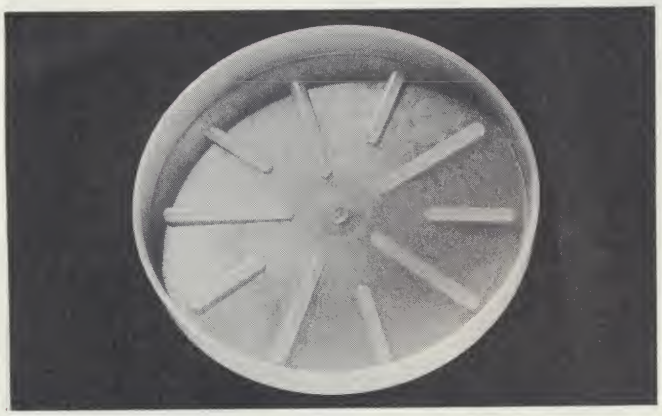
Screw-on top with dust cap effects tight seal which will not loosen. Drops are small and uniform. Screw-on top is far superior to friction-fit style and is the finest available for laboratory use.

Complete Unit	Finish	Each	Case (72)
1 oz. Bottle	18mm	$.15	$ 9.36 (.13 ea.)
2 oz. Bottle	18mm	.17	10.80 (.15 ea.)
4 oz. Bottle	24mm	.23	15.12 (.21 ea.)
8 oz. Bottle	24mm	.30	19.44 (.27 ea.)

DROPPER CAPS AND DUST CAPS are also available separately:

Finish	Dozen	Case (144)
DC-18 — 18mm	$1.10	$10.08 (.07 ea.)
DC-24 — 24mm	1.25	12.96 (.09 ea.)

BOTTLE ACCESSORIES



BOTTLE REST COASTERS

For 500ml, 1000ml, 5 pint reagent bottles as well as regular 1/2 gallon and gallon jugs.Ten heavy ribs on bottom permit drainage of bottle dripping. Also for use under flasks, etc. to reduce danger of breakage. Made of Polyethylene.

	Inside Diameter	Each	Dozen	Case	Number In Case
C-90	90mm	$.40	$4.32 (.36 ea.)	$23.04 (.32 ea.)	72
C-120	120mm	.45	4.80 (.40 ea.)	12.96 (.36 ea.)	36
C-135	135mm	.60	6.36 (.53 ea.)	17.28 (.48 ea.)	36
C-150	150mm	.65	6.96 (.58 ea.)	18.72 (.52 ea.)	36

POURING SPOUT VENTED-FLOW, DRIPLESS

Fits securely in neck of non-standard and standard taper reagent bottles. Pours slowly or rapidly with even rate of flow. Will not drip. Equipped with Pioneer standard hollow stopper for use as dust cap which effects an air-tight seal on spout.

Nine Sizes	Each	Dozen	Case (72)
PS-17 mm 18 mm 19 mm ₹	$.28	$2.76 (.23 ea.)	$14.40 (.20 ea.)
PS-20 mm 21 mm 22 mm	.30	3.00 (.25 ea.)	15.84 (.22 ea.)
PS-23 mm 24 mm ₹ 25 mm	.33	3.24 (.27 ea.)	17.28 (.24 ea.)

WEIGHING BOTTLE

Molded of polypropylene. Body is 25mm ID x 40mm high with approximate 12 ml capacity. Cover fits outside with a 29/10 standard taper joint to form air and water tight seal. Useful for specimens, samples, etc. May be used for oven drying up to 140°C.

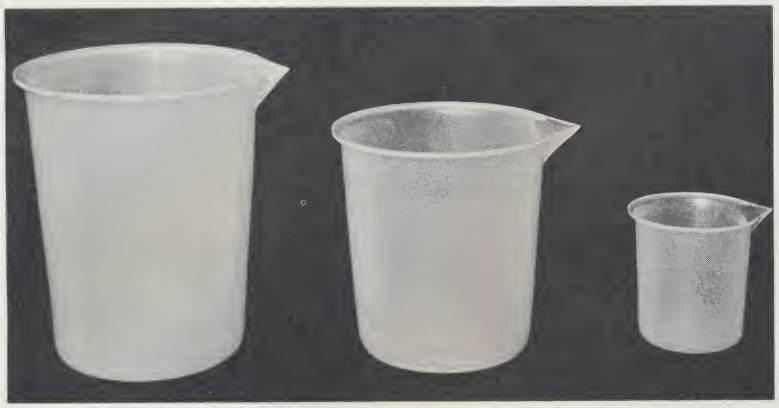
Each, $ .61; Dozen, $6.60 (.55 ea.)
Case (.36) $17.64 (.49 ea.)

STORAGE CONTAINER

A three-piece, polyethylene container with approximately 300 ml capacity. Water and air tight. Use for storage, shipping, etc. Without snap-cap, containers may be stacked while in use; nested when empty. So air-tight that air must be bled from container by lifting one edge while depressing cover. Top ID 2-3/4″; Bottom ID 2-3/8″; Inside height 3-1/4″; Overall height 3-7/8″.

Each $.60; Case (72) $28.08 (.39 ea.)

CONTAINERS and COVERS



BEAKERS THREE SIZES

Sturdy polypropylene, translucent enough to see liquid level easily. Slight taper permits nesting of beakers with resulting space saving. No-drip spout. Will stand up to 140°C. Available in three sizes, 50 ml, 250 ml, and 400 ml.

CODE	EACH	DOZEN	CASE	NO. IN CASE
B-50	$.31	$3.36(.28ea)	$18.00(.25ea)	72
B-250	.44	4.68(.39ea)	25.20(.35ea)	72
B-400	.65	6.96(.58ea)	18.72(.52ea)	36

pH METER SAMPLE CUP & COVER

23 mm OD x 19 mm high. Molded of heat resistant polyolefin, will not scratch or damage electrode. Inexpensive enough to be disposable. Capacity 5 ml. With the C-5 cover, can be used as container for small samples.

B-5 Cup	Dozen	$1.00	Case(144)	$7.20(.05ea)
C-5 Cover	Dozen	$1.00	Case(144)	7.20(.05ea)

BEAKER COVER

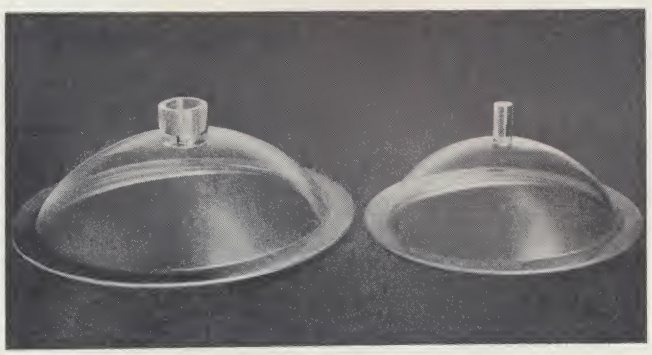
Polypropylene cover for B-250 beaker. Skirt seals below pouring spout to make wide-mouth jar. Flat top for stacking. 5/16" center plug may be cut out for stirring, refluxing, thermometer, etc.

Covers Only: Each, $.44; Dozen, $4.68 (.39 ea.) Case (72), $25.20 (.35 ea.)

BURETTE COVER

Internally ribbed top prevents sealing burette when in use. Light in weight. Fits 50 ml burette.

Each $.21; Dozen, $2.28 (.19 ea.) Case (72) $12.24 (.17 ea.)



DESSICATOR COVER TWO SIZES 160mm-200mm

Now, comparably priced dessicator covers that are practically unbreakable. Intended for use where there is no intense heat. Use where working temperatures are not above 100°C and where there is the possibility of breakage. Made of transparent, heat resistant plastic. Ground flange assures good seal. The 200mm size has opening for #4 rubber stopper for vacuum work.

CODE	EACH	CASE	NO. IN CASE
DC-160	$4.95	$26.70($4.45ea)	6
DC-200	9.95	26.85($8.95ea)	3

DISPENSERS

ALL POLYOLEFIN

REAGENT DISPENSER

Permits safe handling of reagents . . . even acids. Screws on any standard 5 pint acid bottle and regular 1/2 gallon and gallon jugs. One hand operation delivers reagent at about 1000 ml per minute. Slight pressure on relief valve stops flow instantly.

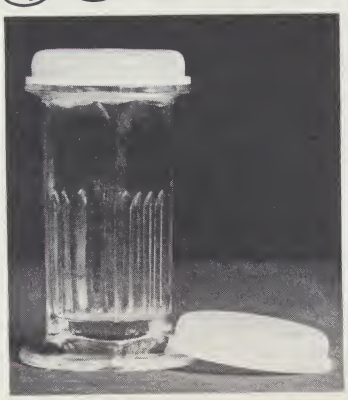
Each $3.75; Dozen, ea.$3.50; Case (36) ea.$3.25

MEASURE-MATIC DISPENSERS TWO SIZES

Unbreakable polyethylene automatic measuring devices. The small size is adjustable to measure any amount from 0 to 10 ml, while the larger size measures any amount from 5 to 25 ml. Both sizes fill from a 16 oz. polyethylene storage bottle. Dispensing cup slides on tube to deliver desired volume every time. Pressure on bottle forces liquid above holes in tube. Removal of pressure allows return of excess liquid to storage bottle and permits immediate pouring without spillage. Both sizes supplied with Pioneer hollow stopper as a dust cover. Sold as complete units only.

CODE	EACH	CASE OF 12
MMD 0-10	$2.75	$30.00(2.50ea)
MMD 5-25	2.75	30.00(2.50ea)

COVERS



COPLIN JAR COVER

POLYPROPYLENE

A low cost cover which serves exactly the same purpose as the glass top without the constant loss through breakage.

Each, $.25; Dozen, $2.52 (.21 ea.)
Case (72) $13.68 (.19 ea.)

WATCH GLASS BEAKER COVERS

Made of unbreakable polypropylene. Autoclavable and inexpensive. Available in three convenient sizes that stack easily for space-saving storage. Can also be used for beaker covers.

	Diameter	Each	Case	In Case
WG-75	75mm	$.20	$17.28 (.12 ea.)	144
WG-100	100mm	.30	33.12 (.23 ea.)	144
WG-125	125mm	.40	23.04 (.32 ea.)	72

STOPPERS

STOPPERS

Hollow, cup-like, uniform taper, 25 mm high. Will not freeze. also useful as dust covers, weighing containers in microwork, etc.

POLYETHYLENE AND POLYPROPYLENE

Size	S-00	S-0	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10
Polyethylene												
Bottom mm	7	9	11	14	17	20	23	26	29	32	35	38
Top mm	13	15	17	20	23	26	29	32	35	38	41	44
Doz.	$1.38	1.38	1.44	1.44	1.50	1.50	1.56	1.56	1.68	1.68	1.92	1.92
Case (144)	8.28	8.28	8.64	8.64	9.00	9.00	9.36	9.36	10.08	10.08	11.52	11.52
Polypropylene												
Doz.	$1.48	1.48	1.54	1.54	1.60	1.60	1.66	1.66	1.78	1.78	2.02	2.02
Case (144)	9.28	9.28	9.64	9.64	10.00	10.00	10.36	10.36	11.08	11.08	12.52	12.52

STANDARD TAPER STOPPERS

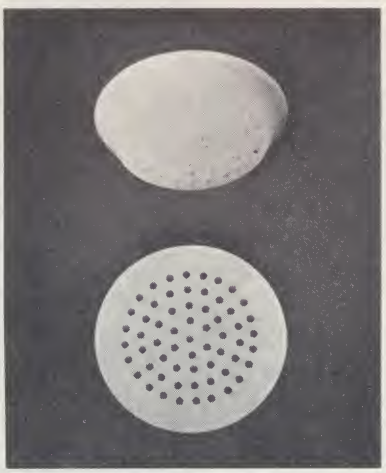
Unbreakable and will not freeze. Ribbed top allows easy removal, prevents them from rolling when resting on top and flange. Flange serves as dust cover and keeps fingers from contact with lip of reagent bottle.

	Each	Dozen	Case (36)
TS-19	$ .31	$3.36 (.28 ea.)	$ 9.00 (.25 ea.)
TS-24	.35	3.72 (.31 ea.)	~~10.00~~ (.28 ea.) 10.08

STOPPERS

Polyethylene stoppers have vertical fin for easy grasping between fingers. Flange projects beyond bottle lip to serve as dust cover. S-40 and S-41 for use with 16-oz. "salt-mouth bottles". S-17 fits most old "raised-letter" reagent bottles.

	Maximum Diameter	Each	Dozen	Case (36)
S-17	17mm	$ .38	$3.72 (.31 ea.)	$ 9.00 (.25 ea.)
S-40	40mm	.46	4.56 (.38 ea.)	11.16 (.31 ea.)
S-41	41mm	.46	4.56 (.38 ea.)	11.16 (.31 ea.)



FILTER DISC

This size #4 filter disc is made of heat resistant polyolefin, and therefore, will not chip or break, and can be autoclaved. The holes are 1 mm diameter. The perforated area is 18 mm, with a total diameter of 25 mm. Use with 24 mm filter paper. The 60° beveled edge permits the disc to be used in ordinary 60° funnels, open bottom crucibles, glass holders, etc. for supporting the filter mass.

FD-4	$.39ea;	Case of 36, $12.60(.35ea)

FUNNELS

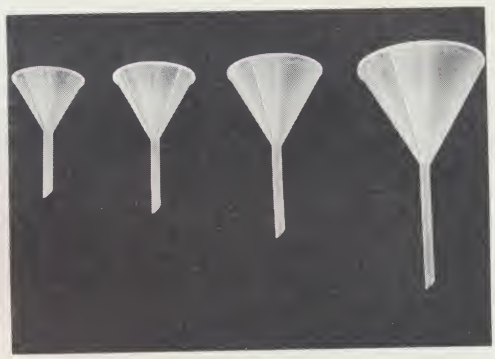
BUCHNER FUNNELS

Sturdy two-piece construction, light in weight, and not top heavy. Specially designed for economy and ease of cleaning. The cups are made of heat and stress-crack resistant polyolefin; the stems are made of polyethylene.

	Plate Diameter	Filter Paper Size	Distance Rim to plate	Approx Cup Capacity	Each	Case	Number in Case
BU-43	43mm	42.5mm	24mm	40ml	$1.75	$16.80 (1.40 ea.)	12
BU-55	56mm	55 mm	30mm	75ml	2.20	14.08 (1.85 ea.)	8
BU-70	71mm	70 mm	40mm	165ml	3.40	16.32 (2.72 ea.)	6
BU-90	91mm	90 mm	47mm	315ml	4.60	14.72 (3.68 ea.)	4

STANDARD STEM FUNNELS

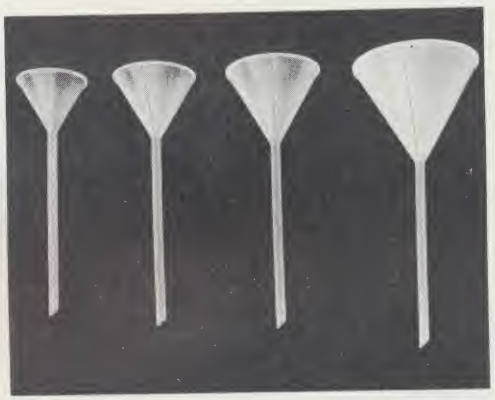
A complete line of unbreakable autoclavable, 60° angle polypropylene funnels. All have exclusive filter-step for faster filtration. External ribs prevent airlock. Parallel stem measures approximately 8mm outside diameter. Used in general chemistry by many of our largest Universities.



	Top Diameter	Stem Length	Filter Paper Diameter	Each	Case	Number in Case
F-55	55mm	60mm	90mm	$.30	$19.44 (.27 ea.)	72
F-65	65mm	65mm	110mm	.35	20.16 (.28 ea.)	72
F-75	75mm	75mm	125mm	.48	20.64 (.43 ea.)	48
F-100	100mm	100mm	185mm	.76	32.64 (.68 ea.)	48

LONG STEM FUNNELS

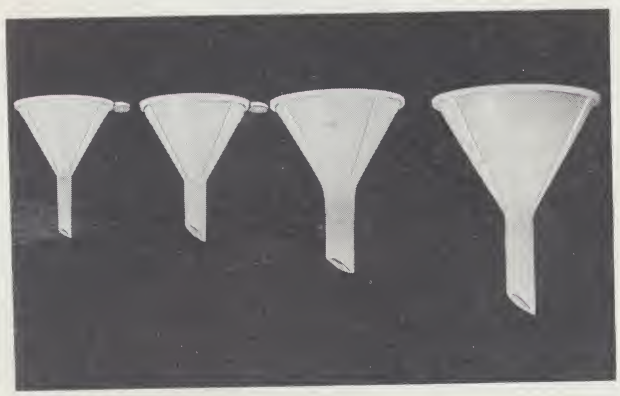
Long stem, unbreakable, autoclavable, polypropylene funnels. This series embraces the same remarkable features as the standard stem funnels . . . filter step for faster filtration, external ribs to prevent airlock, 60° angle . . . plus advantage of long stem. Stem approximately 150mm long and 8mm outside diameter on all sizes.



	Top Diameter	Each	Case	Number in Case
LSF-55	55mm	$ .54	$23.04 (.48 ea.)	48
LSF-65	65mm	.60	26.40 (.55 ea.)	48
LSF-75	75mm	.66	28.80 (.60 ea.)	48
LSF-100	100mm	.84	18.00 (.75 ea.)	24

MICRO FUNNELS

Made of polypropylene in four small sizes. Perfect for microwork, filling burettes, manometers, etc.



	Top Diameter	Stem Diameter	Each	Dozen	Case (72)
F-45	45mm	8mm	$.21	$2.28 (.19 ea.)	$12.24 (.17 ea.)
F-35	35mm	8mm	.19	2.04 (.17 ea.)	10.80 (.15 ea.)
F-28	28mm	6mm	.17	1.80 (.15 ea.)	9.36 (.13 ea.)
F-24	24mm	4.5mm	.17	1.80 (.15 ea.)	9.36 (.13 ea.)

FUNNELS

POWDER FUNNELS

60° angle, autoclavable, polypropylene funnels for use in transferring powders or large volumes of liquid. Parallel stem minimizes bridging of powder. External ribbing prevents airlock. A size for every need.

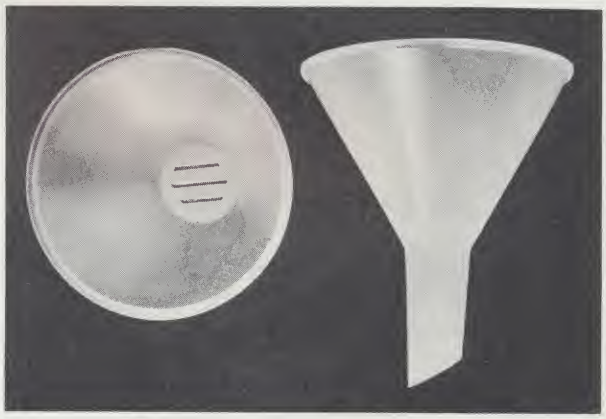
	Top Diameter	Stem Diameter	Stem Length	Each	Dozen	Case	Number in Case
PF-65	65mm	15mm	25mm	$.40	$4.32 (.36 ea.)	$23.04 (.32 ea.)	72
PF-80	80mm	18mm	30mm	.50	5.40 (.45 ea.)	29.52 (.41 ea.)	72
PF-100	100mm	20mm	30mm	.57	6.12 (.51 ea.)	16.56 (.46 ea.)	36
PF-150	150mm	28mm	30mm	.77	8.16 (.68 ea.)	21.96 (.61 ea.)	36

HIRSCH FUNNELS TWO SIZES

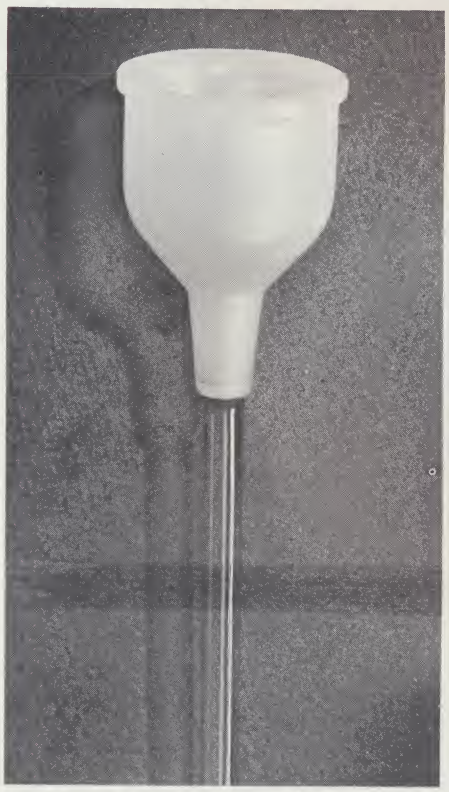
Sturdy, two-piece construction. The perforated plates are easily removed for collection of solids by pushing with a stirring rod inserted in stem. May also be used as regular 60° funnels without the plates.

CODE	PLATE DIAM.	TOP ID	MAX. STEM DIAM.	MIN. STEM DIAM.	STEM LENGTH	Prices EACH	DOZEN	CASE (24)
HF-16	16mm	50mm	13mm	10mm	30mm	$ .78	$8.40 (.70ea)	$15.00 (.625ea)
HF-25	25mm	65mm	13mm	10mm	35mm	1.18	12.84 (1.07ea)	23.04 (.96ea)

Extra plates for the HF-16 are available at $.18 ea; $1.80/dozen; and $3.00/case of 24. The HF-25 uses the FD-4 Filter Disc (page #7) as a plate.



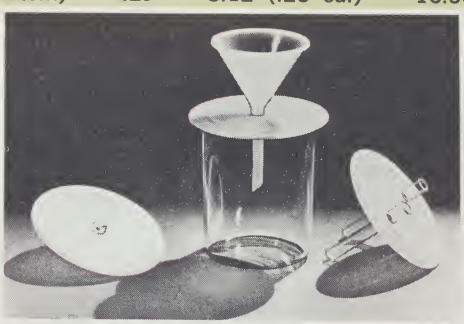
THISTLE TUBE · FUNNEL HOLDER



THISTLE TUBE

Unbreakable. Used in general chemistry by many of our largest Universities. Supplied with special 6 mm diameter, 10" plastic stem recommended for use where student safety is of prime importance. Also available without stem for use with 6mm glass tubing.

	Each	Dozen	Case (72)
T6S (with stem)	$.36	$3.84 (.32 ea.)	$20.88 (.29 ea.)
T6 (without stem)	.29	3.12 (.26 ea.)	16.56 (.23 ea.)



FUNNEL HOLDER

Versatile space saver! Flanged center hole will hold any Pioneer standard or long stem funnel. Diameter, 100mm. Two concentric ribs on bottom prevent sliding and locate holder over 150 ml - 600 ml beakers. Easily adapted to various needs with knife or cork borer. Can hold test tubes over steam bath, etc. May also be used with glass funnels. Saves space in stockrooms and lockers.

Each, $ .31 Dozen, $3.36 (.28 ea.); Case (72) $18.00 (.25 ea.)

PIONEER TUBING

POLYPROPYLENE TUBING

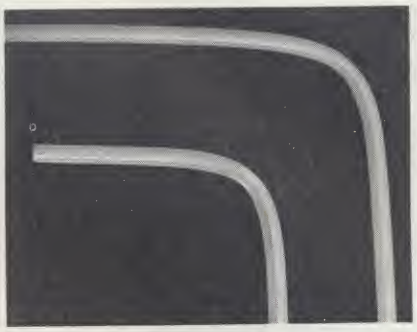
Extruded to highest Pioneer specifications from virgin, almost clear polypropylene. 6 mm in outside diameter for use interchangeable with 6 mm glass tubing. Will stand temperatures to 140°C. May be bent by same technique of careful heat application as used with glass. Safety factor makes it highly recommended for student use.

25 Ft.—$1.75; 50 Ft.—$3.00; 100 Ft.—$5.00

POLYETHYLENE TUBING

Extruded from natural colored, virgin polyethylene. Inexpensive and highly useful in laboratories. Sold only in 100 Ft. coils.

O.D.	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"
I.D.	.170	3/16"	1/4"	3/8"	1/2"	5/8"	13/16"
Wall	.040	1/16"	1/16"	1/16"	1/16"	5/64"	3/32"
Per 100 Ft.	$3.00	$5.00	$6.75	$9.50	$12.50	$17.50	$29.00



90° BENDS

Made of polypropylene for greater rigidity and heat resistance. Pioneer 90° bends eliminate costly student injuries caused by forcing glass tubing through stoppers. Available with 3" and 6" legs.

	Dozen	Case (144)
3" LEGS	$1.00	$ 7.20 (.05 ea.)
6" LEGS	$1.50	$10.80 (.075 ea.)

PIONEER VINYL TUBING

Pioneer Vinyl Tubing is made of the highest quality pure polyvinyl chloride and is available in two grades: (1) Laboratory, Chemical, and Industrial grade; and, (2) Food and Beverage, Hospital and Surgical grade.
Both grades are non-toxic, water-clear, odorless, tasteless, and flexible. Wherever maximum chemical resistance is required (see chart after page #14) the Laboratory, Chemical, and Industrial grade is recommended for use as tubing or sliced as gaskets or washers. The Food and Beverage, Hospital and Surgical grade has Food and Drug Administration approved ingredients and is universally accepted for use by hospitals.

For comparison of physical properties, see the chart below (For prices and working pressures, see chart on page #11. For the chemical resistance chart of the Laboratory, Chemical, and Industrial grade, see the chart following page #14.)

PHYSICAL PROPERTIES

PROPERTIES	TEST METHOD ASTM	LABORATORY, CHEMICAL, INDUSTRIAL	FOOD, BEVERAGE, HOSPITAL, SURGICAL
Specific Gravity		1.29	1.25
Tensile Strength, P.S.I.	D 412	2400	2100
Elongation %	D 412	375	400
100% Modulus of elasticity, P.S.I.	D 412	1000	800
Durometer Hardness, Shore A	D 676	75	67
Torsional Stiffness TF°C	D1043	–25	–35
Brittle Temperature °C	D 746	–28	–34
Color		Clear	Clear
Toxicity		Non-toxic	Non-toxic
Aging characteristics		Excellent	Excellent

No guarantees are expressed or implied.

PRICE AND WORKING PRESSURE CHART

SIZE No.	BORE in "	O.D. in "	WALL in "	MAX. Working Pressure	LABORATORY & INDUSTRIAL GRADE PRICE PER FOOT IN ORDER QUANTITIES OF: Under 50'	1 box (50')	100'-200'	250-450'	500-950'	1000-4950'	Food & Bev. Hosp. & Surg. $/100' coil
1	1/8	3/16	1/32	15	$ .07	$ .065	$ .06	$ .055	$ .05	$ .045	$* 6.00
2	1/8	1/4	1/16	68	.10	.09	.085	.08	.075	.07	* 8.50
3	3/16	5/16	1/16	55	.12	.11	.105	.10	.09	.08	*10.50
4	3/16	3/8	3/32	70	.19	.18	.16	.15	.14	.13	
5	3/16	7/16	1/8	80	.28	.25	.24	.22	.21	.20	
6	1/4	3/8	1/16	55	.15	.14	.13	.12	.11	.10	*13.00
7	1/4	7/16	3/32	60	.24	.23	.21	.19	.18	.17	
8	1/4	1/2	1/8	70	.32	.29	.27	.26	.24	.22	
9	5/16	7/16	1/16	50	.19	.18	.16	.15	.14	.13	
10	5/16	1/2	3/32	60	.27	.24	.23	.22	.20	.19	
11	5/16	9/16	1/8	70	.37	.34	.32	.30	.28	.26	
12	3/8	1/2	1/16	40	.21	.19	.18	.17	.16	.15	*18.00
13	3/8	9/16	3/32	50	.30	.27	.26	.24	.23	.21	
14	3/8	5/8	1/8	65	.41	.37	.35	.33	.31	.29	
15	7/16	9/16	1/16	40	.23	.21	.20	.18	.17	.16	
16	7/16	5/8	3/32	45	.34	.31	.29	.27	.26	.24	
18	1/2	5/8	1/16	30	.25	.22	.21	.20	.19	.18	
19	1/2	11/16	3/32	40	.36	.32	.31	.29	.27	.25	*31.00
20	1/2	3/4	1/8	45	.49	.45	.42	.39	.37	.34	
25	5/8	13/16	3/32	35	.43	.39	.37	.34	.32	.30	*37.00
26	5/8	7/8	1/8	40	.61	.55	.52	.49	.46	.43	
31	3/4	1	1/8	35	.69	.62	.59	.55	.52	.48	*59.00
33	7/8	1-1/8	1/8	30	.80	.72	.68	.64	.60	.56	
35	1	1-1/4	1/8	28	.89	.80	.76	.71	.67	.62	*76.00
37	1	1-3/8	3/16	45	1.40	1.26	1.19	1.12	1.05	.98	
38	1-1/4	1-3/4	1/4	45	2.34	2.11	1.99	1.87	1.76	1.64	
39	1-1/2	2	1/4	40	2.93	2.64	2.49	2.34	2.20	2.05	
40	2	2-1/2	1/4	35	3.51	3.16	2.98	2.81	2.63	2.46	

Notes to the above chart: *See Note Three Below

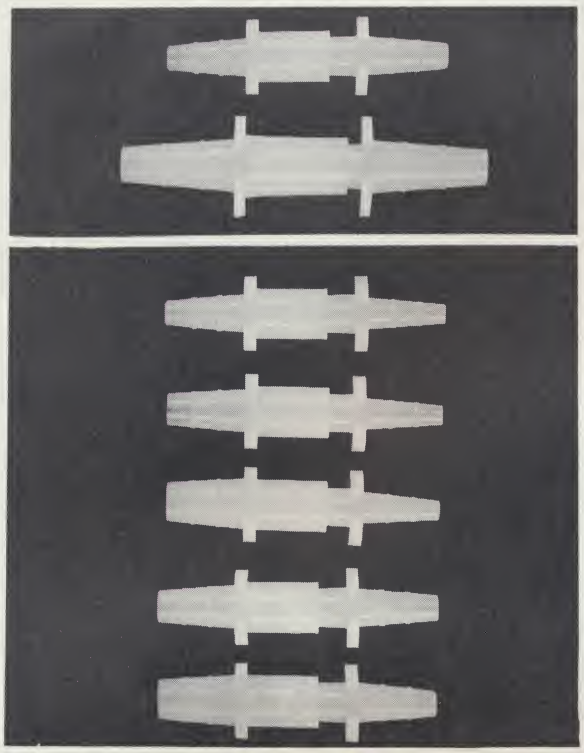
(1) The maximum working pressures are for room temperature and are not to be considered as a guarantee of performance.

(2) Boxes of different size tubing may be combined for quantity discount in the Laboratory and Industrial grade tubing.

(3) The Food and Beverage, Hospital and Surgical grade tubing is sold only in 100' coils. All 40 sizes are available on special order and are priced identical to the Laboratory and Industrial grade.

(4) When ordering the Food and Beverage, Hospital and Surgical grade, please specify by adding "FB" to the size number.PLEASE NOTE THAT IF NO GRADE IS SPECIFIED, THE LABORATORY AND INDUSTRIAL GRADE WILL BE SHIPPED.

TUBING CONNECTORS



QD CONNECTORS TWO TYPES

A quick disconnect, flexible tubing connector. Designed particularly for vacuum applications. Also useful for connecting water lines, manometers, etc. Light in weight and safe for apparatus set-ups.

For Connecting Identical Tubing Sizes

QD-A—Overall length 2⅝"; Tube connections ¾" long; Taper ⅜" to ¼".
Each, $.31; Dozen $3.36 (.28 ea.); Case (72) $18.00 (.25 ea.)

QD-B—Overall length 3¾"; Tube connections 1⅛" long; Taper 9/16" to ⅜". Bore ¼"; increased flow.
Each, $.44; Dozen $4.68 (.39); Case (72) $25.20 (.35 ea.)

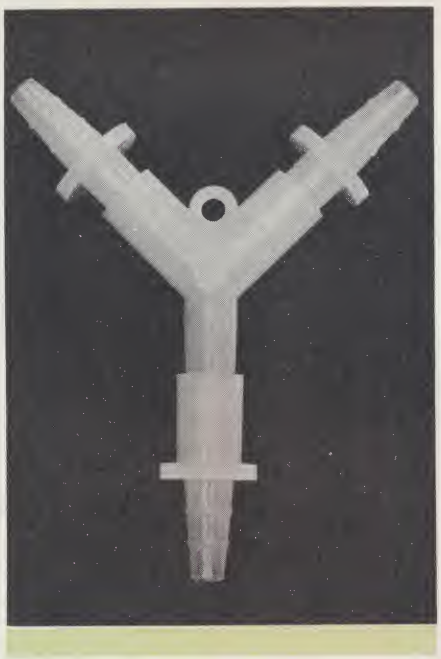
For Connecting Dissimilar Tubing Sizes

CODE	MALE TAPER (inches)		FEMALE TAPER (inches)	
QD-V	3/16 to 5/16	(#3)	1/4 to 3/8	(#4)
QD-W	3/16 to 5/16	(#3)	5/16 to 7/16	(#5)
QD-X	3/16 to 5/16	(#3)	3/8 to 1/2	(#6)
QD-Y	1/4 to 3/8	(#4)	5/16 to 7/16	(#5)
QD-Z	1/4 to 3/8	(#4)	3/8 to 1/2	(#6)

Each, $.35; Dozen, $3.72 (.31 ea.) Case of 36, $10.08 (.28 ea.)

Stock Room Assortment

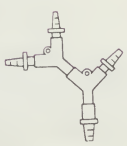
This assortment contains one dozen of each of the above 5 sizes of QD's for connecting dissimilar tubing sizes. A must for every lab stock room.
Price: $16.80 per case of five assorted dozens.

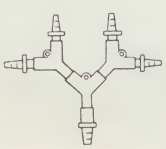


MANIFOLD-Y CONNECTOR

The Manifold-Y Connector combines the functions of a Y connector and a quick-disconnect flexible tubing connector. It has one male and two female arms and can be connected to each other to provide an infinite number of tubing connections, thus simplifying set-ups. Used with the versatile QD Connectors, the Manifold-Y permits multiple connections of flexible tubing—even of dissimilar sizes. Supplied with one female and two male #4 tips (for 1/4"ID tubing), the Manifold-Y is made of unbreakable and freeze-proof polyolefin. With each Manifold-Y added to another, one complete QD-A Connector is left over, thus no components are wasted.

Prices: Manifold-Y (comes with 2 male and 1 female #4 tips): Each $.95; Dozen, $10.20(.85ea); Case of 36, $27.00(.75ea)





Extra tips are also available separately. All are interchangeable and can be used to connect unlike tubing sizes to the Manifold-Y.

Code	Taper
Male #3	3/16 to 5/16
Male #4	1/4 to 3/8
Female #4	1/4 to 3/8
Female #5	5/16 to 7/16
Female #6	3/8 to 1/2

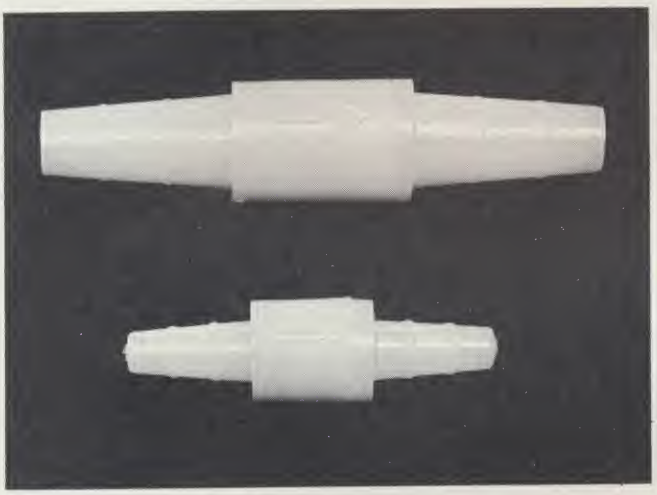
PLEASE SPECIFY CODE NUMBER WHEN ORDERING.
Prices: Dozen, $2.40(.20ea), Case of 6 dozen (may be assorted), ~~$18.96~~ 12.96 (.18ea)

TUBING ACCESSORIES

STOPCOCK

Made of polyolefin, this unbreakable stopcock will not freeze or stick; therefore, lubricant is not necessary. The 3 mm bore throughout permits controllable flow. Tapered pin holds plug in place so plug cannot be accidentally loosened. Tubulations are 1" long with 3/8" to 1/4" taper. Overall length is 2-7/8".

Prices: Each, $2.35; Dozen, $25.80(2.15ea); Case of 36, $70.20(1.95ea)

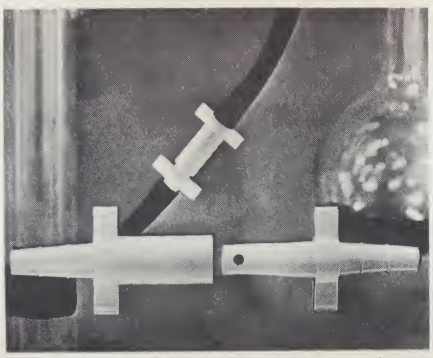


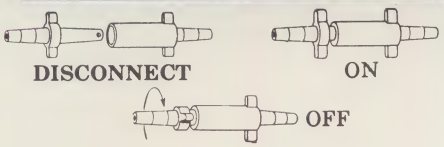
CHECK VALVES TWO SIZES

Made of corrosion resistant polyolefin with pure gum disc, these check valves are light in weight. Arrows molded on valves indicate direction of free flow. Use in vacuum line to filter flask. Operates positively and instantly in any position.

CV-A—Bore, 3/32"; overall length, 2-1/4"; tube connections, 3/4" long with taper from 3/8" to 1/4".
Each, $.56; Dozen, $6.00(.50ea); case (72), $32.40(.45ea)

CV-B—Bore, 1/4" overall length, 3-3/16"; tube connections, 1-1/16" long with taper from 9/16" to 3/8".
Each, $.85; Dozen, $9.00(.75ea); Case (36), $24.48(.68ea)





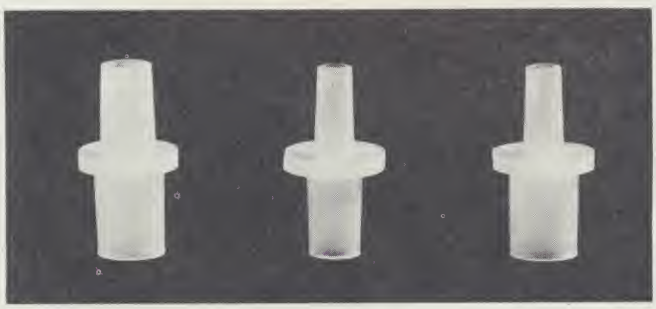
TWISTCOCK CONNECTOR

Unbreakable, corrosion-resistant polyethylene. Serves as both stopcock and quick disconnect flexible tubing connector. Simple operation . . Twist 90° and its on—Twist 90° and it's off. Pull apart to disconnect or clean. Seals against as much as 30 lbs. when pressure is applied to male end. Light in weight with less than 3-3/8" overall length. Tube connections, 7/8" long; taper 3/8" to 1/4". A must for every laboratory.

Each, $.56; Dozen, $6.00 (.50 ea.)

Case (72) $32.40 (.45 ea.)

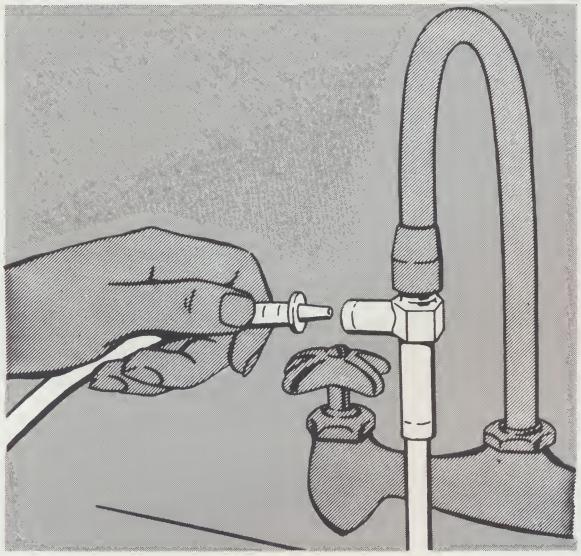
CONNECTORS FOR SEMI-RIGID TUBING



Designed to connect polyethylene or other semi-rigid tubing of unlike sizes. Ends tapered for easier connections. Overall length of connectors 1-3/8".

	Sizes Connected	Each	Dozen	Case (36)
TC 4-6	1/4" I.D. to 3/8" I.D.	$.30	$3.00 (.25 ea.)	$7.20 (.20 ea.)
TC 4-8	1/4" I.D. to 1/2" I.D.	.30	3.00 (.25 ea.)	7.20 (.20 ea.)
TC 6-8	3/8" I.D. to 1/2" I.D.	.30	3.00 (.25 ea.)	7.20 (.20 ea.)

Miscellaneous Specialties



FILTER PUMP

Operates efficiently on water pressures from 11 lbs. up. Polyolefin integral check valve not affected by fumes or corrosive filtrate. Tapered, serrated hose connection takes up to 3/8" tubing. Connects and disconnects instantly and easily. Made with 3/8" IP male thread faucet connection. Additional tubing connectors available.

CORRISION-FREE POLYOLEFIN

Each, $1.60; Dozen, $17.40 (1.45 ea.)
Case (72) $93.60 ($1.30 ea.)
Additional Tubing Connectors:
Each. $.10; Dozen, $1.00; Case (144) $8.64

DRYING TUBES

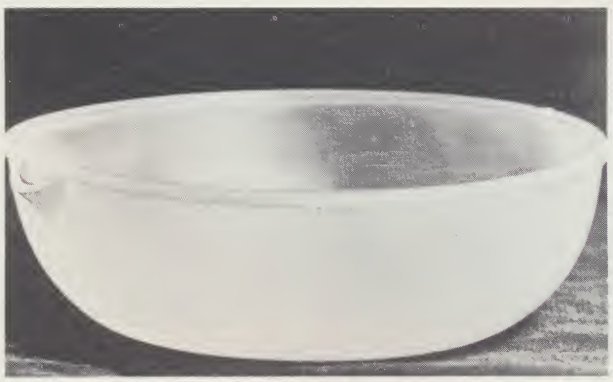
unbreakable. Straight. Comes apart easily for cleaning. Available with one or two fittings. Fittings are 7/8" long and taper from 7/16" to 1/4" Tube is 3/4" OD, 5/8" ID.

	Length	Each	Dozen	Case
DT-100-1	100mm	$.28	$2.28 (.24 ea.)	$13.68 (.19 ea.)
DT-100-2	100mm	.36	3.84 (.32 ea.)	19.44 (.27 ea.)
DT-150-1	150mm	.32	3.36 (.28 ea.)	16.56 (.23 ea.)
DT-150-2	150mm	.40	4.32 (.36 ea.)	22.32 (.31 ea.)
DT-200-1	200mm	.36	3.84 (.32 ea.)	19.44 (.27 ea.)
DT-200-2	200mm	.44	4.80 (.40 ea.)	25.20 (.35 ea.)
Standard quantity in case				72
Fittings only		.18	1.68 (.14 ea.)	12.96 (.09 ea.)
Standard quantity in case				144
Special Lengths on Order				

TEST TUBE

Made of autoclavable polyolefin. 150mm long; 22 mm OD; 40ml capacity. Can be stoppered with Pioneer S-3 hollow stopper.

Each, $.50; Case (36) $16.20 (.45 ea.)



EVAPORATING DISH

125ml capacity, polypropylene dish made to withstand temperatures of 140°C. Can be used safely with hydrofluoric acid, and where there is danger of silica pick-up. Very inexpensive.

Each	Dozen	Case (72)
$.40	$4.32 (.36 ea.)	$23.04 (.32 ea.)

Specify PIONEER

CHEMICAL RESISTANCE CHARACTERISTICS OF PIONEER VINYL TUBING LABORATORY, CHEMICAL & INDUSTRIAL GRADE

Keys to ratings: E = excellent G = Good; T = test in your laboratory for your specific application

Acetic acid	E
Acetic Anhydride	T
Acetone	T
Acetyl Bromide	T
Acetyl Chloride	T
Air	E
Alcohols	E
Aluminum Chloride	E
Aluminum Sulphate	E
Alums	E
Ammonia Gas	E
Ammonium Chloride	E
Ammonium Hydroxide	T
Amyl Alcohol	E
Aniline	G
Animal Oils	E
Antimony Salts	E
Aromatic Hydrocarbons	T
Arsenic Salts	E
Barium Salts	E
Basic Copper Arsenate	E
Beer	E
Benzine	G
Benzoic Acid	E
Benzol	G
Benzyl Alcohol	E
Borax	G
Boric Acid	E
Boric Copper Sulphate	E
Bordeaux Mixture	E
Bromine	E
Butane	G
Butanol	E
Butter	E
Butyl Acetate	T
Calcium Bisulphide	G
Calcium Chloride	G
Calcium Hydroxide	E
Calcium Hypochlorite	E
Calcium Salts	E
Carbolic Acid	E
Carbon Bisulfide	T
Carbon Monoxide	E
Carbon Tetrachloride	G
Castor Oil	E
Caustic Potash (–20%)	E
Caustic Potash (+20%)	G
Caustic Soda (–20%)	E
Caustic Soda (+20%)	G
Chloroform	E
Chromic Acid	E
Chloracetic Acid	T
Chlordane	G
Chlorine (dry)	E
Chlorine(water)	E
Chromium Salts	E
Citric Acid	E
Copper Chloride	E
Copper Sulphate	E
Corn Oil	E
Cottonseed Oil	E
Creosote	G
Cresols	T
Cresylic Acid	E
Cupric Sulphate	E
Cyclohexanone	T
Essential Oils	E
Ether	G
Ethyl Acetate	T
Ethyl Alcohol	E
Ethyl Chloride	E
Ethylene Dichloride	T
Ethylene Glycol	E
Fatty Acid	E
Ferric Chloride	E
Ferric Sulphate	E
Fluoboric Acid	E
Fluo Silicic Acid	E
Formic Acid	E
Formaldehyde	E
Freon	E
Fuel Oil (Aromatic gas) 100 octane	T
Fuel Oil	T
Gallic Acid	E
Gas (natural)	E
Gasoline (aromatic)	G
Gasoline (non-aromatic)	E
Gelatin	E
Glue (depending on type)	E
Glucose	E
Glycerine	E
Hydraulic Oil	E
Hydrochloric Acid	E
Hydrocyanic Acid	E
Hydrofluoric Acid	E
Hydrogen Gas	E
Hydrogen Peroxide(conc.)	G
Hydrogen Peroxide (dil.)	E
Hydrogen Sulphide	E
Isopropyl Acetate	T
Kerosene	G
Ketones	T
Lacquer Solvents	T
Lactic Acid	E
Lard	E
Lead Arsenate	E
Lead Sulphate	E
Lime	E
Linseed Oil	E
Magnesium Chloride	E
Magnesium Hydroxide	E
Magnesium Sulphate	E
Maleic Acid	E
Mercuric Chloride	G
Methyl Chloride	G
Milk	E
Mineral Oil	E
Molasses	E
Naphtha	T
Nickel Chloride	E
Nicotine	E
Nitric Acid 20%	E
Nitrobenzene	T
Nitrogen Oxide	E
Oil	E
Oleic Acid	G
Oxalic Acid	E
Oxygen	E
Paint Solvents	T
Palmitic Acid	E
Pentane	G
Perchlorethylene	G
Perchloric Acid	G
Phenolates	G
Phenols	G
Phosphoric Acid	E
Picric Acid	E
Potassium Chloride	E
Potassium Sulphate	E
Propane	E
Pyrethrum	E
Pyridine	T
Sodium Bisulfite	E
Sodium Bicarbonate	E
Sodium Borate	E
Sodium Carbonate	E
Sodium Chloride	E
Sodium Cyanide	E
Sodium Hydroxide	E
Sodium Hypochlorite	E
Sodium Nitrate	E
Sodium Phosphate	E
Sodium Silicate	E
Sodium Sulphate	E
Sodium Sulphide	E
Sodium Thiosulphate	E
Stannous Chloride	E
Stearic Acid	E
Stoddard Solvent	G
Sulphur Dioxide	E
Sulphuric Acid (conc.)	G
Sulphuric Acid (dil.)	E
Sulphurous Acid	E
Tannic Acid	E
Tar Oil	E
Tartaric Acid	E
Toluene	T
Toluol	T
Trichloracetic Acid	G
Trichlorethylene	G
Turpentine	E
Urea	E
Uric Acid	E
Vinegar	E
Water	E
Whiskey	E
Wine	E
Wool Oil	E
Xylene	E
Xylol	E
Zinc Chloride	E
Zinc Hydrate	E
Zinc Sulphate	E
Zylol	T

No guarantees are expressed or implied by the above table.

Pioneer PLASTIC LABWARE

PIONEER PLASTICS INC.